

Cost of Living and Budget

8/28/17

What does the phrase "cost of living" mean to you?

Money for your needs and wants

What is a budget? your expenses, limit spending
priority 1: bills

2: saving for emergencies

3: fun stuff

Helps you plan

Cost of Living and Budget

Household Budget Exploration Project

Income

Expenses: Fixed, Variable

Graphs (3): Income, Fixed Expenses, Variable Expenses

Spreadsheet: Google Sheet

By Wednesday, 9/06/17:

List of income & expenses for your household
with reasoning for choosing to sort them into
either Fixed Expenses or Variable Expenses.

Cost of Living and Budget: Types of Wages

IWBAT

- discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Wages - How much you get paid, hourly or yearly

Hourly wage - How much you earn per hour worked

Salary - How much you earn in a year

IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Overtime - Money paid at a higher rate for time worked beyond your regular 8 hrs in one day or more than 40 hrs in one week (hourly workers)

Converting from an hourly wage to annual salary:

Johnny makes \$9 per hour for the first 40 hours he works each week. If he works eight hours per day, six days per week for three weeks per month, what is his annual pay?

$$\begin{aligned} \text{Reg } \$9/\text{hr} \times 40\text{h}/\text{w} &= \$360/\text{w} & \$504/\text{w} \times 3\text{w}/\text{m} \times 12\text{m}/\text{y} \\ & & \$18,144/\text{y} \\ \text{OT } \$18/\text{h} \times 8\text{h}/\text{w} &= \$144/\text{w} \\ \text{Total } & \$504/\text{w} \end{aligned}$$

IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Converting from annual salary to an hourly wage:

Sonia has accepted a position which pays \$37,000 per year. If she averages 55 hours per week for 42 weeks per year, what is her effective hourly wage?

$$\frac{\$37,000/\text{y}}{55\text{w} \cdot 42\text{w}/\text{y}} = \frac{\$37,000}{2310\text{h}} = \$16.02/\text{h}$$

IWBAT discuss types of wages and how to convert between the types.

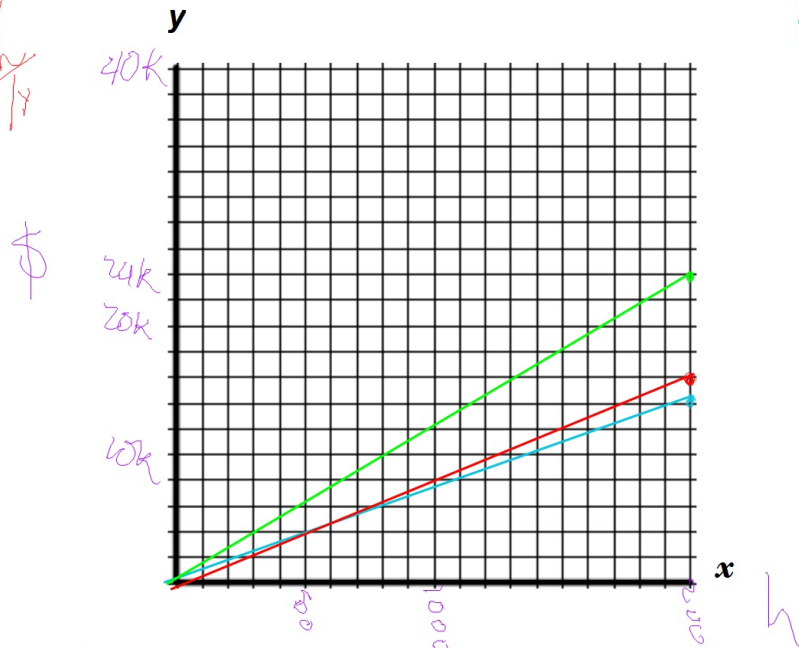
Cost of Living and Budget: Types of Wages

$$\begin{array}{r} 2000 \text{ h/y} \\ \times \$12/\text{h} \\ \hline \$24,000/\text{y} \end{array}$$

$$\begin{array}{r} 2000 \text{ h/y} \\ \times \$8/\text{h} \\ \hline \$16,000/\text{y} \end{array}$$

Jesus is paid \$7.35/hr. Sara is paid \$8/hr. Shannon is paid \$12/hr. Plot their earnings over a year of 40 hr work weeks. 50 w/y

$$\begin{array}{r} 2000 \text{ h/y} \\ \times \$7.35/\text{h} \\ \hline \$14,700/\text{y} \end{array}$$



IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Complete Practice Problems 2.1.2

Graph top to bottom:

Worker A

Worker C

Worker B

By Wednesday, 9/06/17:

List of income & expenses for your household

IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Compensation Packages 08/30/17

What is compensation? What forms can it take?

you get paid for work or injury

money / raise

food

Vacation / time off

reward / gifts

favor

promotion

Supplies / merchandise

discount

Celebration

bonus

better office

insurance

tuition assistance / classes

transportation / company car

child care

cell phone / electronics

Jobs for jobs

housing

furniture

entire business / franchise

preferred parking

Cost of Living and Budget: Compensation Packages

Convert hh:mm time into decimal time & reverse.

Example: 2:30 is 2h 30min which equals 2.5h

1:15 1.25h

3.75h 3:45

2:20 2.33h
 $\frac{20}{60}$

6.17h 6:10
 $\times 60$

Convert decimals into percents and reverse.

0.36 36%

9% 0.09

1.24 124%

251% 2.51

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

By Wednesday, 9/06/17:
List of income & expenses for your household

Cost of Living and Budget: Compensation Packages

Insurance

Auto/Motorcycle/Boat/RV
Life Disability
Homeowners Flood
Renters Bond
Medical/Health Gap
Workman's Comp. SSDI
Phone/elec.
Pet Vision
Trip Dental
Property Malpractice
Business Unemployment

Vacation/PTO

PTO
Pa/Maternity Leave
Paid holidays
Summer/Spring/Fall Break
Sick days
Personal days
Medical Leave of Absence
Sabbatical

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Retirement

SocSec 401K/403B Pension
for profit nonprofit
IRA ← Roth
↳ Defined Benefit
↳ Def. Contribution

Employer contribution How much the employer pays towards your retirement, Ins., etc.

Matching contribution matching the amount taxes 20, you put in.

Contribution limits Set maximum employer will put in

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Total Compensation = wages + Benefits

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Total compensation

An architect's compensation package includes the total cost of a \$250-per-month health insurance plan, the total cost of a \$35-per-month life insurance plan, and a salary of \$55,000 per year. What is the yearly value of the compensation package?

$$\begin{array}{r}
 55,000 \\
 3,000 \\
 + \quad 420 \\
 \hline
 \$58,420 \text{ per year}
 \end{array}
 \quad
 \begin{array}{r}
 250 \text{ health} \\
 \times 12 \\
 \hline
 3,000
 \end{array}
 \quad
 \begin{array}{r}
 35 \text{ life ins.} \\
 \times 12 \\
 \hline
 \$420
 \end{array}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

What is the annual value of a 401(k) plan in which the employer agrees to match 2.5% up to \$15,000 if the employee contributes \$15,000?

$$\begin{array}{r}
 0.025 \\
 \times 15,000 \\
 \hline
 375
 \end{array}
 + 15,000 = \$15,375$$

What is the true hourly wage of a job that pays \$17 per hour and allows 10 hours of paid time off for every 200 hours worked?

$$\begin{array}{r}
 210 \text{ hrs} \\
 \times 17 \text{ hr} \\
 \hline
 3,570
 \end{array}
 \quad
 \begin{array}{r}
 3570 \\
 - 200 \\
 \hline
 \$17.85 \text{ hr}
 \end{array}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

A compensation package that includes vacation pay, retirement, and life insurance but allows all employees to choose which compensation they prefer. This is known as a *cafeteria plan*.

If an employer agrees to pay a portion of the college tuition of an employee, this is known as *educational reimbursement*.

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Floyd's employer purchased a health insurance plan that costs \$825 per month. Floyd pays \$105 toward the plan each month. What is the annual value of the employer's contribution?

$$\begin{array}{l} \text{Total cost } \$825/\text{mo} \\ \times 12 \text{ mo/yr} \\ \hline \$9900/\text{yr} \end{array} \quad \begin{array}{l} \text{Floyd } \$105/\text{mo} \\ \times 12 \text{ mo/yr} \\ \hline \$1260/\text{yr} \end{array} \quad \begin{array}{l} \text{Employer } \$9900/\text{yr} \\ - 1260/\text{yr} \\ \hline \$8640/\text{yr} \end{array}$$

A corporate attorney has weekends off and has 30 paid vacation days per year, including holidays that fall on weekdays. If his salary is \$119,600 per year, what is his pay per workday?

$$\begin{array}{r} 365 \\ - 30 \\ \hline 335 \end{array} \quad \begin{array}{r} 335 \\ - 104 \\ \hline 231 \text{ d} \end{array} \quad \begin{array}{r} \$119600 \\ \hline 231 \text{ work days} \end{array} = \$517.75/\text{work day}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Last year, Rachel contributed \$105 each month toward her 401(k) account. If her employer matched 17% of her contributions, what was the total amount contributed to the 401(k) at the end of the year?

$$\begin{array}{l} \$105/m \\ \times 12 m/y \\ \hline \$1260/y \end{array} \quad \begin{array}{l} 17\% \rightarrow 0.17 \\ \$1260/y \\ \times 0.17 \\ \hline \$214.2/y \end{array} \quad \begin{array}{r} \$1260 \\ + 214.2 \\ \hline \$1474.20/y \end{array}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Piece Rate

An assembly technician has weekends off and has 15 paid vacation days per year, including holidays that fall on weekdays. If her salary is \$63,700 per year, what is her pay per workday?

$$\begin{array}{r} 52 \\ \times 2 \\ \hline 104 \\ \text{weekend} \\ \text{days} \end{array} \quad \begin{array}{r} 365 \\ - 104 \\ \hline 261 \\ \text{week} \\ \text{days} \end{array} \quad \begin{array}{r} 261 \\ - 15 \\ \hline 246 \\ \text{work} \\ \text{days} \end{array} \quad \begin{array}{r} \$63,700/y \\ \hline 246 \text{ workdays} \\ \nearrow \\ \$258.94/\text{workday} \end{array}$$

Cost of Living and Budget: Piece Rate

IWBAT

- how to estimate hourly pay from piece rate
- model piece rates using scatter plots.

Cost of Living and Budget: Piece Rate

What is piece rate?

$\$/\text{piece of work completed}$

Cost of Living and Budget: Piece Rate

Cliff worked 9 hours yesterday, produced 28 units, and earned \$8.75 for each unit produced. Find Cliff's average hourly wage.

$$\begin{aligned} & \$8.75/u \times 28u \quad \$ / h \\ & = \$245 \\ & \$245 / 9h = \$27.22 / h \end{aligned}$$

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

Cost of Living and Budget: Piece Rate

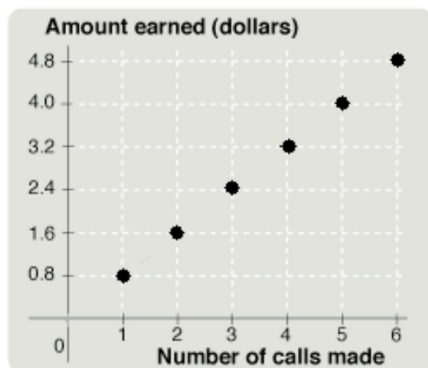
A property inspector gets paid \$350 for each property inspected. If it takes him 8 hours on average to inspect a property and he spends 48 hours each week inspecting properties, what is his average hourly wage?

$$\begin{aligned} & 48 \div 8 = 6 \quad \$ / h \\ & \quad \quad \quad \times 350 \\ & \quad \quad \quad \underline{6} \\ & \quad \quad \quad 2100 \\ & 2100 \div 48 = \underline{\underline{\$43.75/h}} \\ & \quad \quad \quad \underline{350} \\ & \quad \quad \quad \underline{8} \\ & \quad \quad \quad = \$43.75 \\ & \quad \quad \quad \text{per hour} \end{aligned}$$

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

Cost of Living and Budget: Piece Rate

A telemarketer earns a fixed amount for each call that he makes, as shown in the graph below. If the telemarketer makes 12 calls, how much will he earn in total?



$$\begin{array}{r} \$0.80/\text{call} \\ \times 12 \text{ calls} \\ \hline \$9.60 \end{array}$$

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

Cost of Living and Budget: Piece Rate

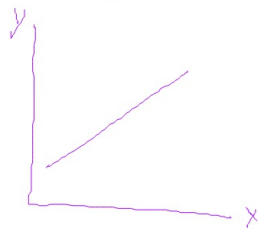
$$\text{Cars towed} \times \$/\text{tow} = \text{hours} \times \$/\text{hour}$$

Practice: 2.3.2

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

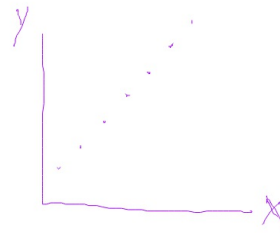
What is a linear equation? What is the difference between a continuous graph and a discrete graph?

A linear equation describes a straight line using two variables



Continuous

all points along
the path included



Discrete

only exact points
included

Cost of Living: Linear Equations and Wages

IWBAT

- model a salary that includes a starting bonus
- understand the y-intercept in a linear equation
- use piece-wise functions to model changes in salary.

Cost of Living: Linear Equations and Wages

What is the equation of a line whose y-intercept is not zero?

$$y = mx + b$$

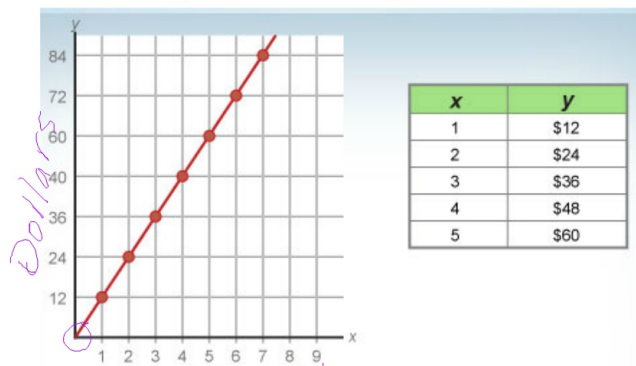
↑ ↑
slope y-intercept

Review the general equation of a line and relate it to hourly wages.

$$y = mx + b$$

↑ ↑ ↑
Total earnings hourly rate of pay hours worked starting bonus

Cost of Living: Linear Equations and Wages



$$y = mx + b$$

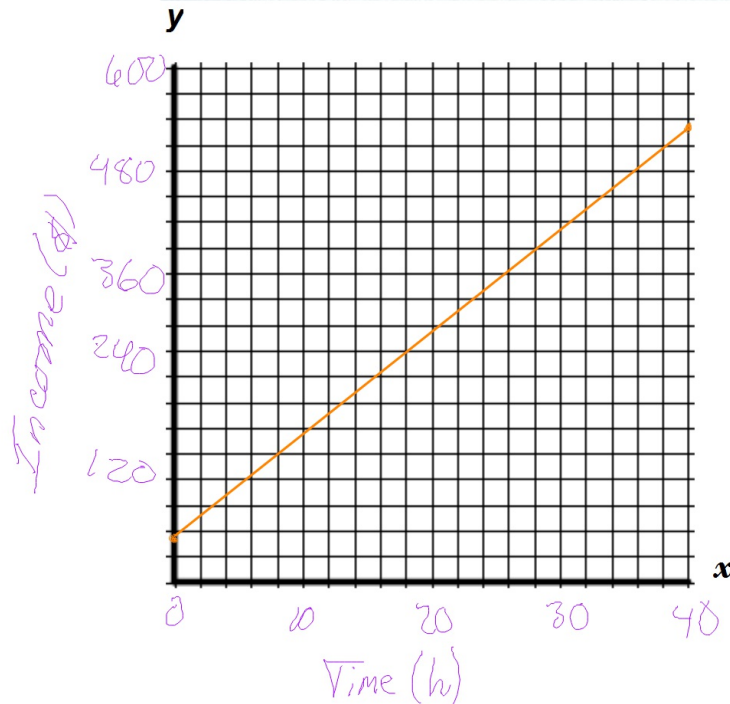
$b = 0$
 $m = 12$

$$y = 12x + 0$$
$$y = 12x$$

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary.

Cost of Living: Linear Equations and Wages

Suppose you are given a \$50 signing bonus at the boutique in addition to your \$12 an hour wage. You will now fill in a table for this situation, where x is the number of hours



$$y = 12x + 50$$

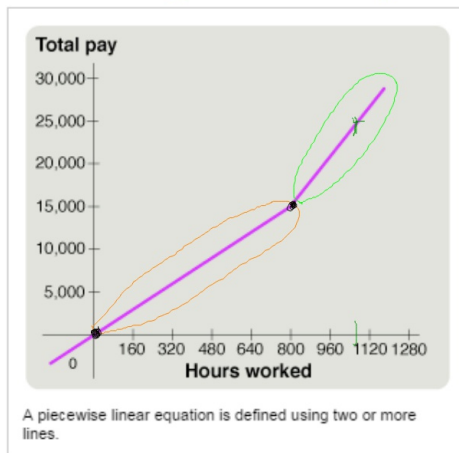
$$y = 12(40) + 50$$

$$y = 480 + 50$$

$$y = \underline{530}$$

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary.

Cost of Living: Linear Equations and Wages



$$y = mx + b \quad b = 0$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{15000 - 0}{800 - 0} = \frac{15000}{800} = 18.75$$

$$y = 18.75x$$

$$y = mx + b \quad b = 15000$$

$$m = \frac{25000 - 15000}{1060 - 800} = \frac{10000}{260} = \frac{1000}{26}$$

$$m = 38.46$$

$$y = 38.46(x - 800) + 15000$$

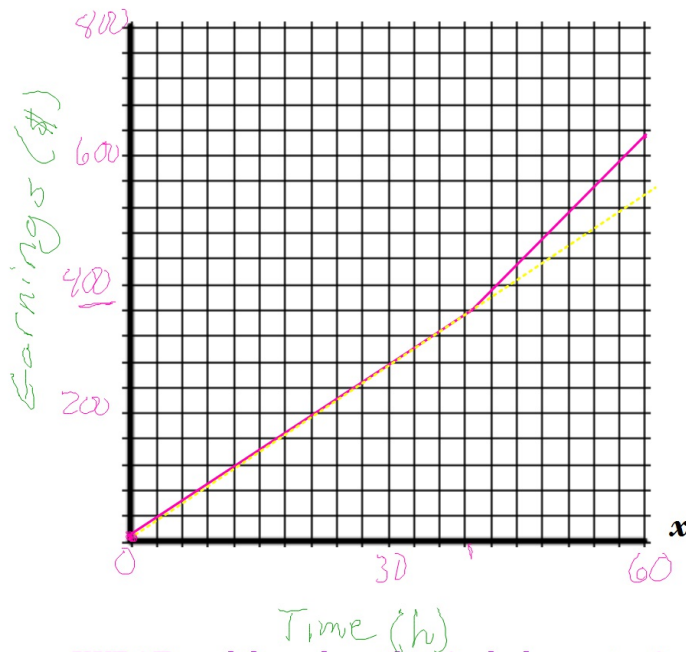
$$y = \begin{cases} 18.75x, & x \leq 800 \\ 38.46(x - 800) + 15000, & x > 800 \end{cases}$$

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary.

Cost of Living: Linear Equations and Wages

$$y = mx + b$$

Johnny makes \$9 per hour for the first 40 hours he works each week and makes 1.5*regular for overtime. Graph his pay. Give the piecewise equations.



$$RT \ y = 9x, \ x \leq 40$$

$$OT \ y = 13.5(x - 40) + 360, \ x > 40$$

$$y = \begin{cases} 9x, & x \leq 40 \\ 13.5(x - 40) + 360, & x > 40 \end{cases}$$

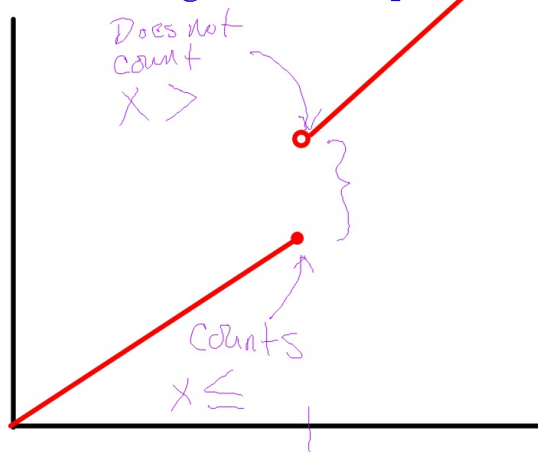
$$(60, 630)$$

$$(40, 360)$$

$$(0, 0)$$

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary.

Cost of Living: Linear Equations and Wages



IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary.

Cost of Living: Linear Equations and Wages

Practice: 2.4

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary.

Cost of Living: Percentages and Commission

9/08/17

What is ten percent of 23,638?

10% \curvearrowright x

$$\begin{array}{r} \times .10 \\ 23638 \\ \hline \end{array}$$

What is ten percent of 7,500 plus fifteen percent of 15,000?

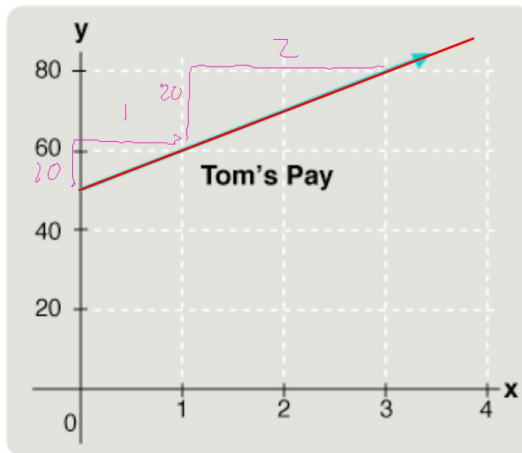
$$\begin{array}{r} 1500 \quad 10\% \\ + 750 \quad 5\% \\ \hline 2250 \quad 15\% \end{array}$$

$$\begin{array}{r} 750 \\ + 2250 \\ \hline 3000 \end{array}$$

10+5

Cost of Living: Percentages and Commission

Given a graph, determine the employee's rate of pay and, if there was a bonus, the amount of that bonus.



Bonus = 50
Rate of pay = 10

Cost of Living: Percentages and Commission

IWBAT

- understand graduated commission and base pay
- use percentages to compute a total commission.

Cost of Living: Percentages and Commission

What does it mean to be paid a commission?

You make a percent of what you sell.
(earn)

Push money Extra money for selling a particular item

Cost of Living: Percentages and Commission

Straight Commission you earn the same % on everything you sell

Flat Commission (Piece Rate)

You earn the same \$ per item sold no matter the price of the item

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Graduated Commission

Amount Sold	Commission
Up to \$1000	10%
\$1000 - \$20,000	20%
Over \$20,000	25%

$\$20,001$ sold

$$\begin{aligned} & \$1000(.10) = \$100 \\ & (\$20000 - 1000)(.20) = \$3800 \\ & (\$20001 - 20000)(.25) = \$0.25 \\ & \hline & \$3900.25 \end{aligned}$$

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Total Commission

Total commission = number of items sold *
commission rate * cost of item sold

$$7 \times .15 \times \$800 + 2 \times .15 \times \$2500 = \$1590$$

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Total Income

Total income = base pay + total commission

$$\$9.35_{\frac{1}{2}}(40) + \$1590 = \$1964$$

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Practice: 2.5

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Calculate the commission for an employee.

John is an appliance salesman. His pay is based on commission only and is currently 26% for each appliance sold. Last month he sold 3 dishwashers for \$499 each, 2 freezers for \$199 each, and 1 stainless steel oven for \$899. Find the total commissions John earned last month.

$$\begin{array}{r}
 3 \times \$499 = \$1497 \\
 \$1497 \times .26 = \$389.22 \\
 2 \times \$199 = \$398 \\
 \$398 \times .26 = \$103.48 \\
 1 \times \$899 = \$899 \\
 \$899 \times .26 = \$233.74
 \end{array}
 \left. \vphantom{\begin{array}{r} 3 \times \$499 \\ \$1497 \times .26 \\ 2 \times \$199 \\ \$398 \times .26 \\ 1 \times \$899 \\ \$899 \times .26 \end{array}} \right\} + \begin{array}{r}
 \$389.22 \\
 103.48 \\
 + 233.74 \\
 \hline
 \$726.44
 \end{array}$$

Cost of Living: Required Paycheck Deductions

IWBAT

- understand which deductions are required on a paycheck
- calculate how each deduction is made
- work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

What kinds of things are found as deductions on a paycheck?

Taxes - Federal Income, State Income, Medicare, Soc Sec, Child Support
Insurance - Vision, Health, Dental
401(K)
Union Dues
Court ordered payments
Pension

Taxes

Deduction
PENSION-COLORADO PERA
CITY OCCUPATIONAL HEAD TAX
STATE WITHHOLDING TAX
FEDERAL WITHHOLDING TAX
MEDICARE TAX - EMPLOYEE

Company Taxes

Deduction
PERA-EMPLOYER

Pre-Tax Deductions

Deduction
DELTA EXCLUSIVE PANEL PRETAX
CIGNA - HMO LOW - Pretax
VISION INSURANCE PRETAX

After-Tax Deductions

Deduction
DEN CLASSROOM TCHRS ASSOC - FT

Company Deductions

Deduction
CIGNA - HMO LOW - ER

Cost of Living: Required Paycheck Deductions

Gross income *your whole pay before taxes*

Net income *your pay after taxes*
"take home pay"

Required deductions:

- Federal Income Tax
- State Income Tax
- Social Security
- Medicare

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Federal Insurance Contributions Act (FICA)

FICA = Social Security + Medicare

Social Security: 6.2%

Medicare: 1.45%

} 7.65%

Pay periods:

- Annually
- Quarterly
- Monthly
- Biweekly
- Weekly
- Semi-monthly

Times per year

1
4
12
26
52
24

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Johnny makes \$9 per hour for the first 40 hours he works each week. He is paid biweekly. How much is deducted from his paycheck for FICA?

$$\begin{array}{r} \$9 \\ \times 40 \\ \hline \$360/\text{wk} \end{array}$$

$$\begin{array}{r} \text{FICA} \\ 360 \times 7.65\% \\ \$275.4 \\ \times 2 \\ \hline \$550.8 \\ 100 \\ \hline \$55.08 \end{array}$$

$$\begin{array}{r} \$ \\ \$9 \times 40 \times 2 \\ = \$720 \\ \$720 \times .0765 \\ = \$55.08 \\ \text{FICA Deducted} \end{array}$$

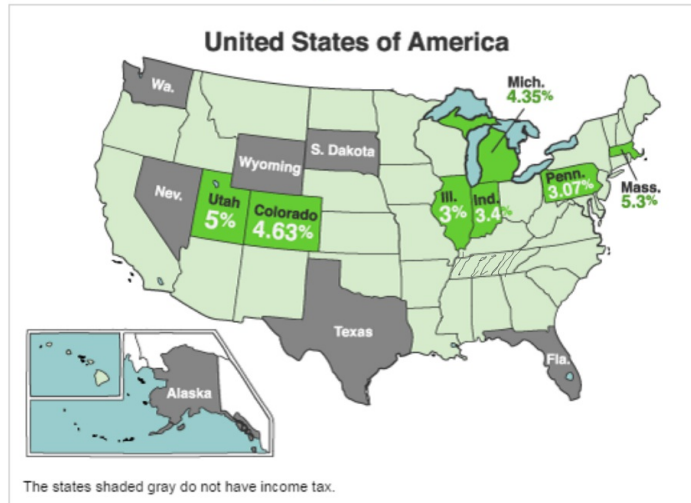
IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

State Income Tax

None

Flat tax - everyone pays the same % no matter how much they earn



IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Income Tax

Progressive tax

Tax brackets

Single Taxpayers:

If Taxable Income Is:	The Tax Is:
Not over \$9,075	10% of the taxable income
Over \$9,075 but not over \$36,900	\$907.50 plus 15% of the excess over \$9,075
Over \$36,900 but not over \$89,350	\$5,081.25 plus 25% of the excess over \$36,900
Over \$89,350 but not over \$186,350	\$18,193.75 plus 28% of the excess over \$89,350
Over \$186,350 but not over \$405,100	\$45,353.75 plus 33% of the excess over \$186,350
Over \$405,100 but not over \$406,750	\$117,541.25 plus 35% of the excess over \$405,100
Over \$406,750	\$118,118.75 plus 39.6% of the excess over \$406,750

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Practice: 2.6

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Optional Paycheck Deductions

9/12/17

Imagine you are applying for a job that pays \$46,200 per year.
You live in New York, which has the following income tax brackets:

Single and married filing separately — filing status ① and ③.		The tax is:	
over	but not over		
\$ 0	\$ 8,000		
8,000	11,000	\$320 plus 4.5%	of the excess over \$ 8,000
11,000	13,000	455 plus 5.25%	" " " "
13,000	20,000	560 plus 5.9%	" " " "
20,000	200,000	973 plus 6.85%	" " " "
200,000	500,000	13,303 plus 7.85%	" " " "
500,000		36,853 plus 8.97%	" " " "

Your federal income tax rate is 22%. What is your net income after all required deductions?

Fed 22%
State
SS } FICA
Med } 7.65%

29.65%

100

\$ 0.2965

\$46,200

\$13,698.30

\$16,466.00
Total Ded.

\$46,200
- 16,466

\$29,734

$$\$973 + \frac{6.85}{100} (46,200 - 20,000) = \$$$

$$\$973 + 0.0685 (26,200) = \$2767.70$$

Cost of Living: Optional Paycheck Deductions

IWBAT

- explore optional deductions such as health insurance, life insurance, disability, and retirement
- practice computing optional deductions
- understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

What kinds of deductions are optional?

Child Support / Court Ordered Garnishment
Retirement
Union Dues
Insurance

Taxes

Deduction
PENSION-COLORADO PERA
CITY OCCUPATIONAL HEAD TAX
STATE WITHHOLDING TAX
FEDERAL WITHHOLDING TAX
MEDICARE TAX - EMPLOYEE

Company Taxes

Deduction
PERA-EMPLOYER

Pre-Tax Deductions

Deduction
DELTA EXCLUSIVE PANEL PRETAX
CIGNA - HMO LOW - Pretax
VISION INSURANCE PRETAX

After-Tax Deductions

Deduction
DEN CLASSROOM TCHRS ASSOC - FT

Company Deductions

Deduction
CIGNA - HMO LOW - ER

Cost of Living: Optional Paycheck Deductions

Medical Insurance

Health
Dental
Vision
Workers' Comp.

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Disability Insurance

Workers' Comp.
SSDI

Life Insurance

Pays your beneficiary in the event
of your demise

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Retirement

Pension
401(k) / 403(b) } Roth
IRA

Pre-tax vs. Post-tax

→ Save you money on taxes now

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Calculating Deductions

deduction per paycheck = $\frac{\text{annual cost}}{\text{\# of paychecks}} * \% \text{ employee covers}$

Ana's employer covers 80% of the cost of a \$5700-per-year health insurance plan, and her share of the cost of the plan is her only optional deduction. How much is deducted from Ana's paycheck each month for health insurance?

$$20\% \quad \frac{.20(5700)}{12} = \$95$$

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Practice: 2.7

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Cost of Living and Budget

9/13/17

Calculate an employee's monthly insurance deduction.

Braden's employer covers 30% of the cost of a \$11,100-per-year health insurance plan, and Braden's share of the cost of the plan is his only optional deduction. How much is deducted from Braden's biweekly paycheck for health insurance?

$$\frac{30\%}{100} = 0.30$$

$$\$11,100 (.30) = \$3330/\text{yr}$$

$$\frac{3330}{26} = 128.07$$

$$\begin{array}{r} 11,100 \\ - 128.07 \\ \hline \$10,971.93 \end{array}$$

employer

Braden 70%

$$\$11,100 (.70) = \$7770/\text{yr}$$

$$\frac{7770}{26} = \$298.85/\text{paycheck}$$

$$\begin{array}{r} \text{Employer} \\ + \text{Employee} \\ \hline 100\% \\ 30\% \\ + \\ \hline 100\% \end{array}$$

Cost of Living: Cost of Living and Budget

IWBAT

- analyze how economic conditions affect income
- explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

Compare income to the cost of living in various geographical areas.

CPI	New York	Philadelphia	Los Angeles	Cleveland	Atlanta
Overall	165	92	156	78	112
Food	142	106	113	106	100
Housing	203	56	235	27	134
Utilities	165	130	115	126	93
Transportation	120	117	108	106	104
Health	182	102	120	113	104
Miscellaneous	136	112	107	100	99

Denver

<http://www.bls.gov/cpi/>

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

Standard of living

Higher standard of living means you have more money left for the fun stuff (wants) after you have paid for your needs

CPI ↓ SOL ↑ for the same income level

Budget

you know how much money you have and where you're spending it so you can put your needs before your wants

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

Budget items

Housing no more than 25% of \$36,000 salary
your gross income (1 week's pay) \$692.31

Utilities electricity, natural gas, water, trash, fuel oil

Groceries

COUPONS Plan your meals
Freeze food Cook extra eat leftovers Shop w/list
Dollar store Comparison shop Storebrand sales
outlet store
Pay old rack Loyalty Club buy in bulk

Other expenses

Child care, clothing, personal care, diapers, gasoline
Car maintenance, cleaning, pet stuff, Insurance

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

$$\begin{array}{r} \$40,800 \\ \times 18\% \rightarrow .18 \\ \hline y\$ 7344 \\ \div 12 \\ \hline m\$ 612 \end{array}$$

$$\begin{array}{l} 8\text{oz} = 1\text{c} \\ 2\text{c} = 1\text{pt} \\ 2\text{pt} = 1\text{qt} \\ 4\text{qt} = 1\text{gal} \\ 8\text{pt} = 1\text{gal} \end{array}$$

Practice: 2.9

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

Cost of Living: Income and Career

9/15/17

Denver is currently the 22nd most expensive rental market in the U.S., behind Dallas, TX and ahead of Houston, TX. A 1-bedroom rental apartment in the city currently averages **\$1,250** per month, while 2-bedrooms average **\$1,650**. One-bedroom rent prices are 9.5% higher than the national average. Mar 27, 2017

Average Rent Prices in Denver, CO: Price Trends & Medians | The ...
<https://www.zumper.com/blog/2017/03/average-rent-prices-in-denver/>

If you wish to rent a place that costs \$1250 per month, how large should your annual household income be?

$$\begin{array}{r} 1250 \\ \times 52 \\ \hline \$65000 \end{array} \qquad \begin{array}{r} \$1650 \\ \times 52 \\ \hline \$85,000 \end{array}$$

Cost of Living: Budget Odyssey

IWBAT

- Categorize budget expenditures/expenses

Cost of Living: Budget Odyssey

As this does not run on Chromebooks, we will complete the game as a class.

**Guidelines for budget exploration activity
& record of decisions w/ reasoning**

IWBAT categorize budget expenditures/expenses

Cost of Living: Budget Odyssey

Now is a good time to finish setting up your budget spreadsheet, if you have not already done so. (Items, categories, costs\$)

IWBAT categorize budget expenditures/expenses

Cost of Living: Budget Odyssey

9/18/17

Categorize a set of budget expenditures/expenses

Student loan payment

Savings account interest

Mortgage payment

Renter's insurance

Purchase snow boots

Groceries

Paycheck

Tattoo

Diapers

Birthday money

Mortgage payment

Income

Paycheck

Savings account interest

Birthday money

Fixed expenses

Renter's insurance

Mortgage payment

Student loan payment

Variable expenses

Purchase snow boots

Tattoo Birthday money

Diapers

Groceries

Cost of Living: Income and Career

IWBAT

- explore various sources of income
- consider the relationship between income and career preparation
- explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career

Explore various sources of income.

Employment

Pros:

Dependable income — you have a paycheck every week, every two weeks, or every month. The type of employment you can obtain is dependent on your education and experience — things you can control. You work regular hours — usually 35 to 40 each week.

Cons:

You are usually not in charge. Typically you do not get to make your own hours or choose what projects or tasks you must do. Your wages, hours, and level of responsibility are ultimately up to someone else.

Self-employment Freelance

Business owner

Investment

	Self-employed	Business owner
Differences	You are providing something that you are required to produce.	You own or run an entity that produces something.
	If you take time off, then you will not generate any income.	You can take time off and the business will still operate and generate revenue.
Similarities	You are your own boss. You must make all decisions. There are no taxes deducted from your gross income automatically. You must do this on your own.	

Cost of Living: Income and Career

Education

Degrees

Associates *AA, AS*
2 yrs

Bachelors *BA, BS*
4 yrs

Masters *MA, MS, MBA*
Bach + 2 yrs

Doctoral *PhD, EdD*
Bach + 6-8 yr, Masters + 4-6 yrs

Professional *JD, MD, OP, DO, DDS*
JD - Bach + 3
MD - Bach + 4 sch + 1 yr Intern
pilot, electrician, welder, plumber, cleaner,

Certificate

Classes via a school
hours → weeks
up to 6mo

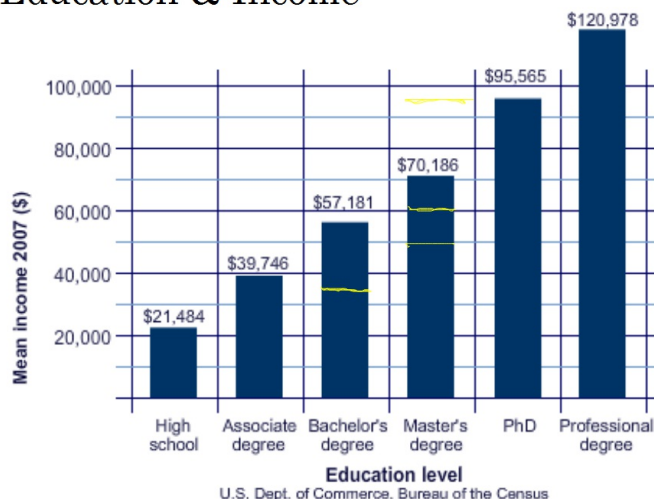
CNA, 911 operator,
firefighter, police,
paramedic, baker/cook,
dog trainer, cosmetologist,
dental assistants

massage therapy, business
owner,
event planner, mechanic,

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career

Education & Income



IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career

Unemployment

$$\text{Unemployment} = \frac{\text{\# of workers willing and able to work but who are jobless}}{\text{total workers}}$$

To write this ratio as a percentage, you multiply its decimal form by 100.

$$\text{Unemployment rate (\%)} = \frac{\text{\# of workers willing and able to work but who are jobless}}{\text{total workers}} \cdot 100$$

Working with Unemployment Rates

This is a table of unemployment rates. For instance, by looking at the table, you can tell that in February of 2002, 5.7% of the population was unemployed.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2000	4.0	4.1	4.0	3.8	4.0	4.0	4.0	4.1	3.9	3.9	3.9	3.9
2001	4.2	4.2	4.3	4.4	4.3	4.5	4.6	4.9	5.0	5.3	5.5	5.7
2002	5.7	5.7	5.7	5.9	5.8	5.9	5.8	5.7	5.7	5.7	5.9	6.0
2003	5.8	5.9	5.9	6.0	6.1	6.1	6.3	6.1	6.1	6.0	5.8	5.7
2004	5.7	5.6	5.8	5.6	5.6	5.6	5.6	5.4	5.4	5.5	5.4	5.4
2005	5.3	5.4	5.2	5.2	5.1	5.1	5.0	4.9	5.0	5.0	5.0	4.9
2006	4.7	4.8	4.7	4.7	4.6	4.6	4.6	4.7	4.5	4.4	4.5	4.4
2007	4.6	4.5	4.4	4.5	4.4	4.6	4.4	4.6	4.7	4.7	4.7	5.0
2008	5.0	4.8	5.1	5.0	5.4	5.5	5.4	6.1	6.2	6.6	6.9	7.4
2009	7.7	8.2	8.6	8.9	9.4	9.5	9.4	9.7	9.8	10.1	10.0	10.0
2010	9.7											

Data taken from Bureau of Labor Statistics

1. If there were 7.7 million people unemployed in December of 2007, how many millions of people were available to work?

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Wages and Me

9/20/17

In the country of Apexistan, 6.9% of the population was unemployed in September of 2014. If there were 186,000,000 people willing and able to work in Apexistan during that month, how many people were unemployed?

$$\begin{array}{r}
 186,000,000 \\
 \times 0.069 \\
 \hline
 128340000 \text{ unemployed}
 \end{array}$$

Cost of Living: Income and Career

Okun's Law

% change in GDP = *Note 5% - 10% unemployed*

$3\% - 2 * (\% \text{ change in unemployment rate})$

Types of unemployment

Gross Domestic Product $3\% - 2(5\%) = -7\%$

Structural - your skills are no longer needed

Frictional - your skills are desired, but you are between jobs

Cyclical - follows business cycles

Unemployment resistant careers *Doctors, govt, nurses, police, firefighters, lawyers, teachers, grocers, farmers*

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career

Practice: 2.8

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Wages and Me

What possible careers are in your future?

Attorney
Pediatrician
Medical Examiner
Forensic Pathologist
Surgeon
Vetnarian
Plumber
Business Owner - Cosmetology
Restraur
CNA
Physical therapist
Psychotherapy

Cost of Living: Wages and Me

IWBAT

- Explain that supply and demand are the primary factors in determining wages.
- Explore wage rates in their potential careers.

Cost of Living: Wages and Me

Using the interview form, discuss plans for researching a possible career with two other students. Record their responses on your form.

Interviewee - the person of whom you are asking the questions

IWBAT explain that supply and demand are the primary factors in determining wages and explore wage rates in their potential careers.

Cost of Living: Wages and Me

Procedure

1. Get out your Chromebook.
2. Read page one of assignment.
3. Proceed to the URL in **bold**.
(http://www.bls.gov/oes/current/oes_nat.htm)
4. Follow the directions on page one of the assignment.
5. Record your answers to questions #1-10.
6. Write a short summary below "Conclusion" explaining
 - what you need to do over the next five years for your chosen career *OR*
 - why you now are looking into a different career other than the one chosen for this exploration.

psychotherapist = psychologist

restauranteur ~ managers, food serving

salon owner ~ skincare specialist

IWBAT explain that supply and demand are the primary factors in determining wages and explore wage rates in their potential careers.

Cost of Living: Wages and Me

Turn in the packet.

Work on practice problems **2.10**, 2.9, 2.8,
or other previously incomplete work.

IWBAT explain that supply and demand are the primary factors in
determining wages and explore wage rates in their potential careers.

2.10 Cost of Living and Budget Review

9/22/17

Create formulas in spreadsheet

Create a Chart/Graph in spreadsheet

2.10 Cost of Living and Budget Review

IWBAT

- demonstrate my proficiency on practice problems before my unit test.

2.10 Cost of Living and Budget Review

Key vocabulary

2.1 Hourly wage, salary

2.2 Total compensation

2.3 Piece rate

2.4 Slope, intercept, piece-wise linear

2.5 Percentage, commission, graduated commission, total commission

2.6 Deductions, FICA, gross income, net income, flat tax, progressive tax, tax brackets

2.7 Pre-tax vs. post-tax

2.8 Unemployment rate, structural unemployment, frictional unemployment, cyclical unemployment

2.9 Cost of living, standard of living, budget

IWBAT demonstrate my proficiency on practice problems before my unit test.

2.10 Cost of Living and Budget Review

Key skills

2.1 Converting from salary to hourly wage and from hourly wage to salary

2.2 Calculate total compensation

2.3 Convert piece rate to hourly wage

2.4 Express hourly wage and starting bonus as linear equation, express overtime as a set of piece-wise linear equations

2.5 Calculate total commission

2.6 Calculate required deductions

2.7 Calculate per paycheck deductions for optional deductions

2.8 Calculate number of unemployed and number of available workers via the unemployment rate equation

As a class, complete an explanation of each key skill (11 total).

IWBAT demonstrate my proficiency on practice problems before my unit test.

2.10 Cost of Living and Budget Unit Test

9/25/17

Paper test
Income & Budgeting

IWBAT demonstrate proficiency on my unit test.